



INFORMATION TECHNOLOGY PROJECT REQUEST (ITPR)

Guidelines & Instructions for Maryland State Agencies

Fiscal Year 2007

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Section 1.0: Introduction

1.1 Overview

The State of Maryland Information Technology Project Request (ITPR) process exists to ensure that all Maryland State Agencies follow a standardized approach to requesting Information Technology (IT) funds that supports the Agency's Information Technology Master Plan (ITMP) and is consistent with the State IT Master Plan. The Agency ITPR submission details the schedule and cost aspects of an Agency's IT investment request.

1.2 Purpose

This document provides guidance and instructions for the Agency Information Technology Project Request process in support of an Agency's five-year IT strategic plan, which captures the fiscal year 2007 – 2011 IT budget request.

1.3 Scope

These guidelines and instructions apply to all units of the Executive Branch of Maryland State Government, including public institutions of higher education other than the University System of Maryland, and any Agency requesting IT funds through the Information Technology Project Request (ITPR) process and/or the Major Information Technology Development Project Fund (MITDPF) as stated in Chapters 467 and 468, Acts of 2002, as mandated by *State Finance and Procurement Title 3 § 3-403*.

1.4 Outcome

The ITPR process seeks to accomplish the following goals:

- Ensure consistency of IT project investments with State IT goals and objectives;
- Ensure consistency of IT project investments with an Agency's IT strategic planning document(s);
- Provide documentation regarding project detail of an IT project investment;
- Capture schedule and cost detail for Agency IT project requests;
- Provide foundational information to determine the State IT Project Portfolio;
- Provide a consistent and repeatable process in support of the "Select", "Control", and "Evaluate" model for State IT Investment and Portfolio Management; and
- Ensure uniformity of IT project request submission.

1.5 Maryland Operating Budget

Information collected from the FY07 Agency ITPRs that receive an FY07 Governor's Allowance will be reviewed and used for publication in the Maryland Operating Budget for FY07. It is critical that ITPR information is entered accurately and completely.

Section 2.0: ITPR Instructions & Format

2.1 General Preparation Instructions

The Agency IT Project Request submissions should encompass a five-year project detail reporting period.

IT Project Input Detail is divided into the following sections:

- Part 1. General Information
- Part 2. Project Information
- Part 3. Schedule
- Part 4. Cost
 - Project Phase Cost by Fund
 - Project Expenditures by Comptroller Object

2.2 Agency ITPR Format and Content

The following section provides instruction on completion of the ITPR form.

Part 1 – General Information

- A. Agency: Enter the full name of your Agency.
- B. Project Title: Provide a concise title that will be the same as the title provided on the project summary of the IT Master Plan.
- C. Executive Business Sponsor: Enter the full names of the Executive Business Sponsors of the project.
- D. IT Project Manager: Enter the full name of the IT project manager.
- E. Agency Senior Management Review: OIT requires that your IT Project Requests be reviewed and approved by the Executive Business Sponsor, the Agency CIO and the Agency CFO. Please indicate that this has occurred by checking the appropriate boxes accordingly.

Please note: A hard copy signature page containing all three signatures is required to be submitted to DBM before the IT Project Request will be considered.

F. Budget:

1. Appropriation Code: Enter the eight-digit RSTARS appropriation code.
2. Sub Program Code: Enter the four-digit RSTARS appropriation code.
3. PCA Code: Enter the five digit RSTARS program cost account code.

G. Over CSB (Y/N): Indicate with a “Yes” or “No” if the project is over the “Current Services Budget” (i.e., unfunded).

H. Project Level: Indicate whether the project level is “New” or “Ongoing” by marking the appropriate check box.

I. Project Plan Number: Provide a two-digit Project Plan Number that is a unique identifier of the project (e.g., 01, 02, 03). This identifier usually correlates to the Agency project numbering scheme cited in the Agency ITMP.

J. Project Type: Indicate whether the project is New Development, System Enhancement, IT Infrastructure, or Other.

Definitions of Project Type

1. New Development: Projects that involve the development and deployment of a system to support a new or changed business function, to replace an existing system which can no longer fulfill business needs, or to automate functions being done manually. New Development includes any COTS packages that will be procured as an IT solution.
2. System Enhancement: Projects that involve significant modifications to the requirements and/or design of an existing system.
3. IT Infrastructure: Projects that involve the installation of new or replacement hardware, cabling, or system software products.
4. Other: If the project is none of the preceding types, then indicate the project type as “Other” and provide an explanation describing the type of project.

K. Project Classification:

Project Classification:

1. Major (Y/N): Indicate whether the project qualifies as a major IT development project. A major IT development project as mandated by *State Finance and Procurement Title 3 § 3-402* is defined as an IT project whose total cost of development equals or exceeds \$1 Million; a project undertaken

to support a critical business function; or a project designated as a major IT development project by the Secretary of DBM.

2. Program Code (Y/N): Indicate whether a separate Agency MITDP appropriation program code has been established.
3. Cross Cutting (Y/N): Indicate by selecting “Yes” or “No” if the project impacts multiple Agencies, federal/local government or involves the sharing of information across those entities.

Part 2 – Project Information

- A. Project Description: Describe the project in general – why the project is being done; scope of the project – what is being done; and the expected performance outcome at project completion – what the end result will be. Projects should be defined in terms that can be understood by non-technical managers. The description should be described in terms of the business function supported.
- B. Project Status: Provide a summary of the current status of the project. This should be the project phase in the System Development Life Cycle and should include time and cost status – on time and on budget, etc. for that phase.

Definitions of Project Status

1. Initiation: The period of time that begins when management determines that it is necessary to enhance a business process through the application of information technology. The purposes of the Initiation Phase are to: identify and validate an opportunity to improve business accomplishments; identify significant assumptions and constraints on solutions; recommend the exploration of alternative concepts and methods to satisfy the need. During this phase the Program Sponsor designates a Project Manager who prepares a Statement of Need or Concept Proposal.
2. Concept Development: The period of time that begins when the Concept Proposal has been formally approved and requires study and analysis that may lead to system development activities.
3. Planning: The period of time in which a comprehensive plan for the recommended approach is prepared.
4. Requirements Analysis: The period of time during which the requirements for a software product are formally defined and documented.
5. Design: The period of time during which the designs for architecture, software components, interfaces, and data are created, documented, and verified to satisfy requirements.
6. Development: The period of time to convert the deliverable of the Design Phase into a complete system.
7. Integration and Test: The period of time during which subsystem integration, system security, and user acceptance testing are conducted.
8. Implementation: The period of time for installing and testing the final system.

9. Operations and Maintenance: The period of time during which a software product is employed in its operational environment, monitored for satisfactory performance, and modified as necessary to correct problems or to respond to changing requirements.
10. Disposition: The period of time when a system has been declared surplus and/or obsolete and the task performed is either eliminated or transferred to other systems.

C. IT Solution: This section is divided into the following eight sub-sections:

1. Technology: Provide a summary of the technology that will be used to satisfy the business need when the system is implemented.
Does this technology exist in the overall Maryland Technology Architectural Framework (MTAF) Technical Reference Model (TRM)?
If the products **do exist** in the overall TRM:
Are the products classified as Sunset, Twilight or Other?
Does the Agency already have these products? If not, what other agencies are using this technology? Are licenses available? How will the products be acquired? After the products are acquired, they will need to be added to the Agency's TRM Spreadsheet.
If the products **do not exist** in the overall TRM:
Explain why new technology is required, cost, how it will be acquired, and any other issues. After the products are acquired, they will need to be added to the overall TRM and the Agency's TRM.
2. Program Strategic Goals: Provide a summary of how this investment supports your Agency mission, goals and objectives, as defined in the Agency MFRs. Please provide narrative when referring to Managing For Results (MFR) goals and objectives.
3. Critical Success Factors: Identify the three most important technical and/or business factors critical to the success of this project and how they will be monitored.
4. Major Stakeholders: Identify the Major Stakeholders of the project. Stakeholders are those who have a vested interest in and will be impacted by the outcome of implementation of the project.
5. Major Customers: Identify the major customers that the project will target when implemented. Customers are direct recipients of the project's products or services.
6. External Dependencies: Identify the external dependencies and issues that must be resolved before major milestones can be achieved. External Dependencies are any items that are outside of the scope of the project, but upon which the project relies and is dependent. External dependencies should be viewed as relationships and managed as risks. Please identify IT and non-IT related external dependencies. Also, indicate any special requirements that are needed to implement the project such as network (LAN/WAN), desktop, software, etc.
7. Acquisition Strategy: Provide a summary of the Acquisition Strategy that will be used to acquire the goods or services needed to implement the project.

8. Authority/Mandate: Select “Yes” or “No” if there is a legal or regulatory authority that requires the Agency to pursue the project. If selecting “Yes”, cite authority and provide an explanation of the legislation, mandate, authority, etc.

Note: It is important to accurately record this indicator, as the information will have bearing on the “Selection” process for funding consideration for projects.

If completed, the following information can be extracted from the System Boundary Document as defined in the SDLC. For projects under development, this information may be located in the System Boundary Document, Functional Requirements, Acquisition Strategy, or System Design Document as defined in the SDLC.

- D. Business Need Justification: Provide a summary of the business need and supporting justification for investment in this project. The narrative should clearly indicate why the project is required.

E. Benefits:

1. External: Provide a summary of the anticipated external benefits of the project when implemented. An external benefit is one that is realized by a stakeholder or customer of the system. The narrative should include quantifiable (example - reducing transaction turnaround time from 15 days to 10), where possible.
2. Internal: Provide a summary of the anticipated internal benefits of the project when implemented. An internal benefit is one that is realized within the business unit that owns the system. The narrative should include quantifiable benefits, such as business process savings, staff efficiencies, etc., where possible.
3. Return On Investment (ROI): Identify the anticipated ROI when the project is implemented. The ROI is another way of looking at the investment by considering the cost in relation to the “profit” or return on an investment. A primary component of ROI is benefit, or payback. Benefits are typically identified as either tangible or intangible.

Tangible benefits are those benefits that are “capable of being appraised at an actual or approximate value”. Intangible benefits are those benefits that cannot be assigned a dollar value. An example of an intangible benefit is “flexibility”. This could be defined as a proposed system that may allow a manager to have two or three different people perform the same job without significant training expense. Benefits should always be linked to performance measures.

If the benefits of a project are tangible, Agencies should use the calculation method shown below to determine ROI. If they are determined to be intangible the Agency should provide a summary that clearly describes the intangible benefits of the project.

When providing ROI analysis, please calculate a “percentage” using the following calculation. The objective is to identify and rank those alternatives whose benefits outweigh cost, maximizing return for State government.

The mathematics of ROI Calculation

Three data points are required:

- a) Time period – Typically one year.
- b) Investment – Typically includes the cost of hardware, software, software licenses, professional services, and maintenance over the time period being considered.
- c) Return – The sum of the cost savings and revenue enhancements gained.

To calculate as a Percentage:

Example 1

If a customer gains benefits (payback) of \$1,000,000 in 12 months on a total investment of \$250,000 in the same time period, their ROI expressed as a percentage can be calculated as follows:

$$\begin{aligned} \text{If, Return} &= \text{Payback} - \text{Investment}; \\ \text{ROI} &= [(\text{Payback} - \text{Investment}) / \text{Investment}] * 100, \\ \text{or in this case:} \\ [(\$1,000,000 - \$250,000)] / \$250,000 * 100 &= 300\% \end{aligned}$$

F. Major Risks: all projects contain uncertainty and risk. The process of identifying those risks and planning appropriate responses should they occur is defined as Risk Management. Risk Management consists of:

1. Assessing the probability of a risk factor occurring,
2. Estimating the negative impact should the risk occur, and
3. Determining the appropriate action to take based on 1 and 2.

Appropriate responses to identified risks fall into three broad categories:

1. Risk Avoidance – taking action to eliminate the probability of the risk. This category is generally considered when the probability of the risk is high and the consequence is significant, or when the consequence is so significant as to present a fatal threat to the project.
2. Risk Mitigation – planning action to take to minimize the negative impact of the risk should it occur. This category of response is generally considered when the consequence of the risk factor is of medium severity.
3. Risk Acceptance – no action is planned should the risk factor occur. This category of response is generally considered when the consequence of the risk factor is low and does not warrant the cost of potential mitigation or avoidance strategies.

In this section, identify the major factors or events that could cause the project to experience significant difficulties or failure (risk identification) as well as any planned actions to make the consequences of those events acceptable (risk response). The complete Risk Management documentation can be found at <https://www.itac.state.md.us> by selecting Guidelines and Publications.

Also include in this section:

Known or Anticipated Scope Change: Provide a summary of any major scope changes to the project that have impacted or will adversely impact budget and schedule.

Known or Anticipated Cost Change: Provide a summary of any known or anticipated changes to cost that have impacted or will adversely impact budget and schedule.

- G. Security and Privacy Requirements: Provide a summary of your plan that addresses security, privacy and disaster recovery. If this is an existing system, indicate whether the security/privacy/disaster recovery plan is in place. If a plan hasn't been developed, describe when and how a plan will be implemented to address these critical requirement areas.
- H. Architecture and IT Policy Conformance: Provide a summary of key Agency architectural standards and policies applicable to this project.

Part 3 – Schedule

Figure 1 is a completed sample of the input table that is part of the ITPR form. Agencies are asked to list the major lifecycle milestones, by Systems Development Life Cycle (SDLC) phase, for the project. Up to five milestones can be input for each phase. If an iterative development approach or multi-task task orders are employed for the project, and if the phases overlap for a budget year, clearly differentiate to which iteration each milestone relates (e.g. a two phase, or two-staged, project would have its various milestones identified as “Phase I” and “Phase II” respectively). Project Assessments should be conducted at the completion of each major milestone beginning at the Concept Phase to help assess the progress and health of the project.

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Figure 1. Sample IT Project Major Milestones by SDLC Phase

Phase	Major Milestones	Planned Start Date	Actual Start Date	Planned End Date	Actual End Date
Initiation/Concept	Identify initial requirements and obtain project funding and approval	02/02/05	04/02/05	06/03/05	
Planning/Req. Analysis	Delivery of the management plan and requirements; design review completed	07/01/05	07/01/05	11/08/05	
	Screen review changes made, delivered and signed off by Business Sponsor and IT Project Manager	07/01/05	07/01/05	11/08/05	
Design / Development / Integration / Test	Application developed and ready for agency testing at the contractor site	09/01/05		11/30/05	
	Application delivered and installed on development server	09/01/05		11/05/05	
	Testing on development server	09/06/05		11/15/05	
Implementation	Application installed on production servers	12/01/05		12/04/05	
	Final updates to all databases for last business day loaded	12/20/05		12/31/05	
	Begins operation January 1, 2006	01/01/06		01/02/06	
Operations / Maintenance	Continue operations and maintenance	01/01/06			
Disposition (Not required)					

Part 4 – Cost

In this section the estimated or ongoing cost of a project is captured in two tables. The first table, Figure 2, Project Phase Cost, is a completed sample of the input table that captures cost by consolidated Systems Development Life Cycle (SDLC) phase, and by fund category. The funding categories are divided into General Fund, Special Fund, Federal Fund, and Reimbursable Fund categories.

O&M costs reflected must include the *total cost of ownership*, including the costs for: development; training; assuring integrity; data confidentiality; and system availability. The O&M cost must also include the hardware and software necessary to meet security requirements and recovery capability based on the system's functional requirements, including training and disaster recovery planning and testing.

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Figure 2. Project Phase Cost by Fund

General Funds	Prior to FY05	Actual FY05	Approp FY06	Budget Req FY07	Gov Allow FY07	Projected FY08	Projected FY09	Projected FY10	Projected FY11	Total GF
Initiation/Concept										
Planning/Req. Analysis										
Design/Development /Integration/Test			500,000							500,000
Implementation										
Operations/ Maintenance										
TOTAL GF			500,000							500,000
Special Funds Excluding MITDPF	Prior to FY05	Actual FY05	Approp FY06	Budget Req FY07	Gov Allow FY07	Projected FY08	Projected FY09	Projected FY10	Projected FY11	Total SF Excl MITDPF
Initiation/Concept										
Planning/Req. Analysis			148,945							148,945
Design/Development /Integration/Test			557,626							557,626
Implementation			84,583							84,583
Operations/ Maintenance			208,846	131,601		131,601	136,701	142,006	147,522	898,277
TOTAL SF (Excl MITDPF)			1,000,000	131,601		131,601	136,701	142,006	147,522	1,689,431
Special Funds MITDPF	Prior to FY05	Actual FY05	Approp FY06	Budget Req FY07	Gov Allow FY07	Projected FY08	Projected FY09	Projected FY10	Projected FY11	Total SF MITDPF
Initiation/Concept										
Planning/Req. Analysis										
Design/Development /Integration/Test										
Implementation										
Operations/ Maintenance										
TOTAL SF (MITDPF)										
Special Funds Summary	Prior to FY05	Actual FY05	Approp FY06	Budget Req FY07	Gov Allow FY07	Projected FY08	Projected FY09	Projected FY10	Projected FY11	Total SF
Initiation/Concept										
Planning/Req. Analysis			148,945							148,945
Design/Development /Integration/Test			557,626							557,626
Implementation			84,583							84,583
Operations/ Maintenance			208,846	131,601		131,601	136,701	142,006	147,522	898,277
TOTAL SF			1,000,000	131,601		131,601	136,701	142,006	147,522	1,689,431
Federal Funds	Prior to FY05	Actual FY05	Approp FY06	Budget Req FY07	Gov Allow FY07	Projected FY08	Projected FY09	Projected FY10	Projected FY11	Total FF
Initiation/Concept										
Planning/Req. Analysis										
Design/Development /Integration/Test			500,000							500,000
Implementation										
Operations/ Maintenance										
TOTAL FF			500,000							500,000
Reimbursable Funds	Prior to FY05	Actual FY05	Approp FY06	Budget Req FY07	Gov Allow FY07	Projected FY08	Projected FY09	Projected FY10	Projected FY11	Total RF
Initiation/Concept										
Planning/Req. Analysis										
Design/Development /Integration/Test										
Implementation										
Operations/ Maintenance										
TOTAL RF										
TOTAL ALL FUNDS			2,000,000	131,601		131,601	136,701	142,006	147,522	2,689,431

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The second table, Figure 3, Project Expenditures by Comptroller Object, is a completed sample of the input table that captures total project cost by Comptroller Object Code.

Figure 3. Project Expenditures by Comptroller Object

Comptroller Object Codes	Prior to FY05	Actual FY05	Approp FY06	Budget Req FY07	Gov Allow FY07	Projected FY08	Projected FY09	Projected FY10	Projected FY11	Total
01. Salaries, wages				131,601		131,601	136,701	142,006	147,522	689,431
02. Technical and fees										
03. Communications										
04. Travel										
06. Fuel and Utilities										
07. Motor Vehicle Oper. and Maint.										
08. Contractual Services			2,000,000							2,000,000
09. Supplies and Materials										
10. Equipment Replacement										
11. Equipment Additional										
12. Grants, Subsid. and Contrib.										
13. Fixed Charges										
14. Land and Structures										
TOTAL			2,000,000	131,601		131,601	136,701	142,006	147,522	2,689,431

Section 3.0: Submission Requirements

3.1 Submission Procedure

Agency IT Project Request submissions are to be completed on the Information Technology Advisory Council (ITAC) web site by COB **August 31, 2005**. ITPR submissions must be consistent with the information contained in each Agency's respective ITMP, specifically Section 3.2.4, Agency IT Investment Portfolio.

A hard copy signature page containing the signatures of the Executive Business Sponsor, Agency CIO and Agency CFO is required to be submitted to DBM before the IT Project Request will be considered.

A sample format is included as the last page of this document. Agency letterhead is acceptable.

The signature page should be mailed to:

Patricia Wade
DBM OIT, 4th Floor
45 Calvert Street,
Annapolis, MD 21401

3.2 DBM OIT Staff Assistance

OIT staff members are available to assist Agencies with ITPR planning activities. For information or assistance please contact one of the following OIT Analysts:

- Patricia Wade, 410-260-7062; pwade@dbm.state.md.us
- Wayne Petrush, 410-260-7882; wpetrush@dbm.state.md.us

Section 4.0: Review & Approval

Agency IT Project Requests will be reviewed by various organizations: DBM OIT, DBM Office of Budget Analysis (OBA), and the Department of Legislative Services (DLS). ITPRs will be evaluated for consistency with the Agency's ITMP and State IT legislated policy, standards, and procedures.

The annual appropriation will constitute the formal approval of an Agency's ITPR for the budget request year. Inclusion of new initiatives in the appropriation will constitute tentative approval of multi-year projects, subject to future funding availability. Agencies are required to update the ITPR data via the ITAC web site with the Governor's Allowance budget detail prior to January 7, 2006.

ITPR Signature Page

Agency:

Name: _____

Address: _____

Phone#: _____

Project Title: _____

Budget: **Appropriation Code:** _____

Sub-Program Code: _____

PCA Code: _____

Agency CIO:

Name: _____

Phone #: _____

Signature: _____

Agency CFO:

Name: _____

Phone #: _____

Signature: _____

Executive Business Sponser:

Name: _____

Phone #: _____

Signature: _____